

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
BUREAU OF AIR, PERMIT SECTION
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PROJECT SUMMARY
FOR PROPOSED RENEWAL OF ACID RAIN PROGRAM PERMITS
FOR COAL-FIRED POWER PLANTS IN ILLINOIS

Schedule

Public Comment Period Begins: January 2, 2005

Public Comment Period Closes: February 6, 2005

Illinois EPA Contacts

Permit Analyst: Kunj Patel

Community Relations Coordinator: Brad Frost

Introduction:

The Illinois EPA is proposing to renew the Acid Rain permits for 21 coal-fired power plants in Illinois, as listed in the table below.

These permits also address gas and oil fired units at these plants that are subject to the Acid Rain program.

Background:

The overall goal of the Acid Rain Program is to achieve significant environmental benefits through reductions in emissions of sulfur dioxide (SO₂) and nitrogen oxides (NO_x), the primary causes of acid rain. To achieve this goal at the lowest cost to society, the program employs both traditional and innovative, market based approaches for controlling air pollution. In addition, the program encourages energy efficiency and pollution prevention.

Title IV of the Clean Air Act sets as its primary goal the reduction of annual SO₂ emissions by 10 million tons below 1980 levels nationally (from 20 million tons per year to 10 million tons per year nationally) by the year 2000, with a permanent national cap of 8.95 million tons per year by the year 2010. In addition, NO_x emissions from electric utility plants are to be reduced by 2 million tons per year from 1980 levels of approximately 7 million tons.

To achieve these reductions, the law required a phased tightening of the restrictions placed on fossil fuel-fired power plants. Phase I became effective on January 1, 1995 and affected 110 plants nationwide, most of which burned high sulfur coal. Illinois had eight power plants that were affected. USEPA issued Phase I permits working closely with Illinois EPA. Phase II of the Acid Rain Program became effective on January 1, 2000. Seven hundred power plants in addition to the Phase I plants are affected by Phase II. Individual states issued Phase II permits with USEPA approval for their affected power plants.

USEPA has overall authority for the Acid Rain Program. It also manage the national system for tracking emissions and compliance purposes.

Acid Rain Permits:

The federal Acid Rain program applies to fossil-fuel fired electric generating units. Acid Rain permits only address requirements under the Acid Rain program.

For SO₂ emissions, Acid Rain permits address the obligation of affected sources to hold and retire SO₂ allowances to account for actual emissions of SO₂. An SO₂ allowance provides an affected source with authorization to emit one ton of SO₂. Affected source must reduce one allowance for each ton of SO₂ that is actually

emitted. SO₂ allowances are issued to existing power plants each year based on allocation established by the Clean Air Act and USEPA rules. Affected sources may buy, sell, or carry over SO₂ allowances depending upon its actual emissions and approach to compliance.

For this purpose, Southern Illinois Power Coop (SIPCO) will continue to receive an allocation of SO₂ allowances for new Boiler 123. This is because this new boiler “repowered” or replaced three existing boilers, Boilers 1, 2 and 3, with a lower-emitting Circulating Fluidized Bed Boiler. If this boiler were a “stand-alone” new unit, it would not received such allowances and SIPCO would have to obtain allowance for it from the other units at the plant or buy allowances from other sources.

Acid Rain permits also identify the applicable limits on NO_x emissions under the Acid Rain program. Different limits are established by USEPA based on use of low-NO_x combustion techniques on different types of boilers. USEPA has not established limits for gas or oil fired units.

For this purpose, Ameren Energy has applied for NO_x averaging for all its plants and Dynegy Midwest Generation has applied for NO_x averaging for two of its plants. Averaging allows a source to determine compliance from a combination of affected units that it owns, rather than on a unit-by-unit basis. The rules for averaging require that the resulting NO_x emissions be the same as or less than if units complied on its own.

The Illinois EPA does not have authority to change the conditions of these permits as they reflect provisions of the Acid Rain program. Issuance of these permits is required by Titles IV and V of the Clean Air Act and Section 39.5(17) of the Illinois Environmental Protection Act. Acid Rain permits do not affect sources’ responsibility to meet all applicable federal, state, and local requirements.

Request for Comments:

Comments are requested on the proposed renewal of these permits. Comments must be postmarked by midnight February 6, 2005. A hearing may be held if a request is made raising a significant issue related to the permit(s). Requests for information, comments, and questions should be directed to Brad Frost, Division of Air Pollution Control, Illinois EPA, PO. Box 19506, Springfield, Illinois 62794-9506, phone 217-782-2113, TDD phone 217-782-9143.

Units at Coal-fired Power Plant in Illinois subject to Acid Rain Program

Company Name	Oris No.	I.D. Number	Plant Name	Unit ID	Boiler Type	2005-2009 SO ₂ Allowances (per year)	NO _x Annual Limit (lb/mmBtu)
Ameren Energy Generating Company	861	135803AAA	Coffeen	Unit 1	CY	5,085	0.86 ^a
				Unit 2	CY	15,381	0.86 ^a
	863	033801AAA	Hutsonville	Unit 5	T - I	2,223	0.45 ^a
				Unit 6	T - I	2,302	0.45 ^a
	864	137805AAA	Meredosia	Unit 1	T – I	298	0.45 ^a
				Unit 2	T - I	322	0.45 ^a
				Unit 3	T - I	280	0.45 ^a
				Unit 4	T - I	255	0.45 ^a
				Unit 5	T - I	5,991	0.45 ^a
				Unit 6	Oil/Gas	46	--
6017	079808AAA	Newton	Unit 1	T - I	15,625	0.45 ^a	
			Unit 2	T - I	13,932	0.45 ^a	
Ameren Energy Resources Generating Company	6016	057801AAA	Duck Creek	Unit 1	DBW	11,201	0.46 ^a
	865	143805AAG	E D Edwards	Unit 1	DBW	2,899	0.46 ^a
				Unit 2	DBW	6,916	0.46 ^a
				Unit 3	DBW	9,125	0.46 ^a
City, Water, Light & Power	963	167120AAO	Dallman	Unit 31	CY	1,385	None ^c
				Unit 32	CY	1,568	None ^c
				Unit 33	T - II	5,199	0.45 ^b
	964		Lakeside	Unit 7	CY	2,554	None
				Unit 8	CY	1,446	None

^a NO_x Averaging Plan

^b Early Election Plan

^c Cyclone fired boilers with steam flow less than 1,060,000 of lb/hour at 100% load are not subject to NO_x annual limit, pursuant to 40 CFR 76.6(a)(2).

Company Name	Oris No.	I.D. Number	Plant Name	Unit ID	Boiler Type	2005-2009 SO ₂ Allowances (per year)	NO _x Annual Limit (lb/mmBtu)
Electric Energy	887	127855AAC	Joppa	Unit 1	T – I	5,286	0.45
				Unit 2	T – I	4,522	0.45
				Unit 3	T – I	5,151	0.45
				Unit 4	T – I	4,771	0.45
				Unit 5	T – I	4,793	0.45
				Unit 6	T – I	4,459	0.45
Dominion	876	021814AAB	Kincaid	Unit 1	CY	13,592	0.86
				Unit 2	CY	14,977	0.86
Dynergy Midwest Generation	889	157851AAA	Baldwin	Unit 1	CY	18,109	0.86
				Unit 2	CY	19,147	0.86
				Unit 3	T - I	18,343	0.45
	891	125804AAB	Havana	Unit 1,	Oil/Gas	35	None
				Unit 2		45	
				Units 3-8		35	
				Unit 9	DBW	8,803	0.46
	892	155010AAA	Hennepin	Unit 1	T - II	2,018	0.40 ^a
				Unit 2	T - I	7,940	0.40 ^a
	897	183814AAA	Vermilion	Unit 1	T - II	2,834	0.45 ^a
				Unit 2	T - II	3,830	0.45 ^a
	898	119020AAE	Wood River	Units 1-3	Oil/Gas	3	None
				Unit 4	T - II	2,258	0.40
				Unit 5	T - II	9,478	0.40

^a NO_x Averaging Plan

Company Name	Oris No.	I.D. Number	Plant Name	Unit ID	Boiler Type	2005-2009 SO ₂ Allowances (per year)	NO _x Annual Limit (lb/mmBtu)
Midwest Generation	867	031600AIN	Crawford	Unit 7	T - II	7,235	0.45 ^b
				Unit 8	T - II	9,848	0.45 ^b
	886	031600AMI	Fisk	Unit 19	T - II	10,031	0.45 ^b
	874	197809AAO	Joliet 9	Unit 5	CY	8,674	0.86
	384		Joliet 29	Unit 71	T - II	7,578	0.40
				Unit 72	T - II	6,176	0.40
				Unit 81	T - II	7,294	0.40
				Unit 81	T - II	7,556	0.40
	879		179801AAA	Powerton	Unit 51	CY	10,701
		Unit 51			CY	10,571	0.86
		Unit 61			CY	10,513	0.86
		Unit 61			CY	10,596	0.86
	883	097190AAC	Waukegan	Unit 7	T - II	8,212	0.45 ^b
				Unit 8	T - II	7,838	0.45 ^b
				Unit 17	CY	3,104	None ^c
	884	197810AAK	Will County	Unit 1	CY	5,321	0.86
				Unit 2	CY	4,849	0.86
				Unit 3	T - II	6,993	0.45 ^b
				Unit 4	T - II	13,801	0.45 ^b
SIPCO	976	199856AAC	Marion	Unit 123	CFB	6,517 ^d	None ^d
				Unit 4	CY	6,839	0.86
				CT 5 & 6	Gas/Oil	--	None

^a NO_x Averaging Plan

^b Early Election Plan

^c Cyclone fired boilers with steam flow less than 1,060,000 of lb/hour at 100% load are not subject to NO_x annual limit, pursuant to 40 CFR 76.6(a)(2).

^d Boiler 123, which repowered Boilers 1, 2 and 3, receives the allowances allocated to those boilers. As a circulating fluidized bed boiler, Boiler 123 is not subject to a NO_x annual limit, pursuant to 40 CFR 76.